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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,231	04/16/2004	Chi-Ming Che	V9661.0068	7772

7590

12/06/2006

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EXAMINER
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GRAY, JILL M

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/825,231	<b>Applicant(s)</b> CHE ET AL.	
	<b>Examiner</b> Jill M. Gray	<b>Art Unit</b> 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/16/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of dopant complex I, wherein M is Platinum and the ultimate species is that of the last formula of claim 20 in the reply filed on August 16, 2006 is acknowledged.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 6, 8-9, and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Shi et al, 5,755,999 (Shi).

Shi teaches an organic light-emitting device comprising at least one emissive layer comprising at least one host material and at least one dopant complex, said dopant complex comprising a transitional metal coordinated to ligands of the type contemplated by applicants in claims 1 and 4. See abstract and formula I, column 2, lines 1-15. In addition, Shi teaches an EL device essentially as claimed in claims 2 and 3, and 6 comprising a substrate having a first electrode, a hole transport layer, at least one emissive layer comprising at least one host material and at least one dopant

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complex, a charge transport layer and a second electrode, note Figure 2 and column 3, lines 39-50. Also, the emissive layer can be spin-coated or vapor deposited as required by claims 8 and 9. See column 35, lines 30-35. Regarding claims 16, 17, and 22, Shi teaches a method essentially as claimed and incorporating into a display. See Examples 14-16.

Therefore, the teachings of Shi et al, anticipates the invention as claimed in present claims 1-4, 6, 8-9, and 16-17.

4. Claims 1-6, 8-9, 13, 16-17, and 22 are rejected under 35 U.S.C. 102(b) and (e) as being anticipated by Tsuboyama et al, US 2003/0054198 A1 and Tsuboyama et al, 6,991,857 B2 respectively, hereinafter referred to collectively as "Tsuboyama". All references are based upon the '198 publication.

Tsuboyama teaches an organic light-emitting device comprising at least one emissive layer comprising a host material and at least one dopant complex, said dopant complex comprising a transition metal coordinated to ligands essentially as claimed in claims 1 and 4, further teaching that the metal can be platinum. See abstract, [0035], [0036], [0037], and Formula 44. In addition, Tsuboyama teaches that his EL device comprises a substrate, a hole transport layer, at least one emissive layer comprising a host and at least one dopant, a charge transport layer and a second electrode, per claims 2, 3, and 6. See Figures 1B and 1C. As to claim 13, Tsuboyama teaches that the hole transport layer can the same type of material contemplated by applicants, such as CBP. See [0017]. Moreover, Tsuboyama teaches that the host material can also be CBP, per claim 5, and that said emissive layer can be vapor deposited as required by

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claims 8 and 9. See [0150] and [0152]. Regarding claims 16, 17, and 22, Tsuboyama teaches a method essentially as claimed. Note Example 5.

Accordingly, the teachings of Tsuboyama anticipate the invention as claimed in present claims 1-6, 8-9, 13, and 16-17.

5. Claims 1-5, 8-9, 13-14, and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Lin et al, "Structural, Photophysical, and Electrophosphorescent Properties of Platinum(II) Complexes Supported by Tetradentate N<sub>2</sub>O<sub>2</sub> Chaletes" (hereinafter Lin).

Lin teaches an organic light-emitting device comprising a substrate having an electrode, a hole transport layer (NPB), an emissive layer comprising a host material (Bepp<sub>2</sub>) and tetradentate dopant complex, charge transport layer (LiF) and second electrode, as required by claims 1-5, 13-14, and 16-17. In addition, Lin teaches that the layers are vapor deposited, per claims 8 and 9. See pages 1265 and 1266.

Accordingly, the teachings of Lin anticipate the invention as claimed in present claims 1-5, 8-9, 13-14, and 16-17.

6. Claims 1-4, 16-17, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al, 6,800,380 B2, (Kim).

Kim teaches an organic light-emitting device comprising at least one emissive layer comprising at least one host material and at least one dopant complex comprising a transition metal coordinated to a ligand of the type contemplated by applicants and method of making, per claims 1 and 16-17. In addition, Kim teaches a device comprising a substrate having a first electrode, hole transport layer, at least one

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emissive layer comprising at least one host material and at least one dopant complex, a charge transport layer and second electrode as required by claims 2-3. See abstract and column 3, lines 51-64.

Therefore, the teachings of Kim anticipate the invention as claimed in present claims 1-4, 16-17 and 22.

7. Claims 1-5, 8-9, 13-14, 16-17, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Che, 6,653,654 B1

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Che teaches an organic light-emitting device comprising at least one emissive layer comprising at least one host material and at least one dopant complex comprising a transition metal coordinated to two bidentate ligands, essentially as claimed in claim 1. See abstract. In addition, Che teaches an EL device essentially as claimed in claims 2-4, method of making, and device per claims 16-17 and 22, wherein the host material (claim 5), hole transport layer (claim 13) and charge transport layer (claim 14) are essentially as claimed. See Figure 5. In addition, Che teaches that M can be platinum, as required by applicants. Regarding claims 8-9, Che teaches that the emissive layer is vapor deposited. Note Examples.

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Accordingly, the teachings of Che anticipate the invention as claimed in present claims 1-5, 8-9, 13-14, 16-17, and 22.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 7, 15, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Che, 6,653,654 B1 or Lin et al, "Structures, Photophysical, and Electrophosphorescent Properties of Platinum(II) Complexes Supported by Tetradentate N<sub>2</sub>O<sub>2</sub> Chelates" (Lin), each as applied above.

Che and Lin are as set forth previously. Each teaches CIE coordinates describing light emission wherein  $x=.33$  and further teach a method comprising the step of changing the color by adjusting the concentration of the dopant complex within the instant claimed range. It would have been obvious to the skilled artisan during routine experimentation at the time the invention was made to modify said concentration of the

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dopant complex commensurate with the desired color of light or to obtain white light. As to claim 7, the inclusion of a filter would have been an obvious variant to filter color in the light-emitting device. Therefore, the teachings of Che and Lin would have rendered obvious the invention as claimed in present claims 7, 15 and 21.

### ***Double Patenting***

11. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

12. Claims 1, 10-12, and 16-20 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1, 6-7, 9-10, and 15-18 of copending Application No. 10/835,481. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

More specifically, the claimed dopant complex of two bidentate NO ligands or a tetradentate NOON ligand of the copending application is the same invention as that set forth in the instant claims.

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated



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by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,653,654 B1.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the dopant complex of the present invention embraces that of the prior art.

No claims are allowed.

### **Conclusion**

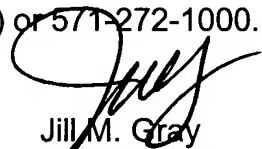
15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jill M. Gray  
Primary Examiner  
Art Unit 1774

jmg